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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/600,712	06/23/2003	Michael Francis Dube	14150-00601	5751

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EXAMINER	
FELTON, MICHAEL J	

ART UNIT	PAPER NUMBER
1791	

MAIL DATE	DELIVERY MODE
06/10/2009	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/600,712	DUBE ET AL.	
	Examiner	Art Unit	
	MICHAEL J. FELTON	1791	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *27 March 2009*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *61-65,67,68,70-84 and 86-99* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *61-65,67,68,70-84 and 86-99* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *20 November 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *5/21/2009*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 3/25/2009 has been entered.

Response to Arguments

2. Applicant's arguments with respect to claims 61-65, 67, 68, 70-84, and 86-99 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 103

3. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

4. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to

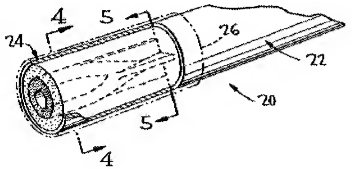
consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

5.

6. Claims 61-64, 67, 68, 70-75, 77-81, 83, 84, 86, 87, 89-99 are rejected under 35 U.S.C. 103(a) as being unpatentable over Berger (US 4,046,063) in view of Dorsey (US 5,549,124) and Homburger (US 3,297,038).

7. Regarding claim 61-64, 67, 70, 73-75, 78-81, 83, 84, 86, 87, 90, and 96-99 Berger discloses a cigarette with a filter element that is an outer cylindrical shape and an inner filter member made from steam bonded cellulose acetate (see figure 1 below regarding shape, col. 6, 2-9 and col. 3, 34-53 regarding steam bonding and cellulose acetate). The inner filter member has a cavity that has a cylindrical end and a conical end and on the other side of the conical end is a crimped structure in the shape of a cross. Figure 1 illustrates the open end of the cavity distal to the tobacco rod, however, Berger discloses that it would be reasonable to reverse the orientation (col. 4, line 67--col. 5, line 7).

FIG. 1



8. Berger does not indicate expressly state that the filter incorporates cellulose acetate treated in a manner that results in the filter element being sufficiently flexible to

be squeezed and return to cylindrical shape. Berger does disclose that cellulose acetate is a preferred material (col. 3, 34-53) and that the inner material is steam bonded, which is the same process used to make the material used for making the instant invention flexible. It would have been obvious to on of ordinary skill in the art at the time of invention that the material used in the invention of Berger would have been resilient due to steam bonding.

9. Berger does not expressly disclose that plasticizers such as triacetin are used to make the cellulose acetate tow. This is conventional in the art, and, in addition, the prior art incorporated by reference in Berger discloses the use of plasticizers such as triacetin in formation of filter plugs made of cellulose acetate tow (see Berger, US 3,552,400, col. 2, 39-45). It would have been obvious to one of ordinary skill in the art that the cellulose acetate used in the invention of Berger (US 4,046,063 and 3,552,400) would have been plasticized with triacetin, and the inner member would have been steam bonded in addition (as taught by Berger, col. 6, 2-9).

10. Berger does not disclose placing a capsule in the cavity. However, placing capsules and other active agents in cavities within cigarette filters is well known in the art. For instance, Berger incorporates by reference US 3,533,416 (to Brooks and Berger), that contains adsorbents or smoke-modifying materials in a similar cavity to Berger 4,046,063. Homburger and Dorsey disclose spherical capsules located in the cavities (with voids or second regions surrounding the capsules) within filter segments that are ruptured and treat the cigarette smoke. Dorsey discloses a capsule in a cavity that contains a second region surrounding the capsule that connects to the tobacco rod

and the filter element, and that when broken, releases fluid to wet the tobacco and the filter element. The wet tobacco helps filter the smoke as does the wetted filter material. Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention that the capsule of Dorsey or Homburger could be used in the cavity of Berger to be wet the tobacco and filter element upon rupturing the capsule resulting in improved filtration (as taught by Dorsey, see abstract, col. 1-col. 2).

11. Regarding claims 68, 75, 83, and 87 Berger disclose a 2 axis and a 3 axis crimp on the inner material (see figures 1, 5, 6, and 7).

12. Regarding claim 70, the distilled water of Dorsey or the activated carbon of Homburger would alter the overall composition of mainstream smoke.

13. Regarding claim 71, Berger, Dorsey, and Homburger do not disclose sizes of the capsule or cavities, however, it would have been obvious to one of ordinary skill in teh art that the capsule would need to be smaller than the diameter of the cavity within which it was to be placed, and that this diameter would also be smaller than the typical diameter of a cigarette (and hence cigarette filter). It would have been obvious that the cavity of Berger would have been about 4 mm and that a capsule to be placed in the cavity would need to be smaller than 4 mm, or about 3.5 mm. In addition, it is well known that different cigarettes from different manufacturers have different diameters, but they are generally less than about 8 mm.

14. Regarding claim 72, Berger (figure 1) shows the cavity occupying approximately half the length of the filter.

15. Regarding claims 77, 89, and 92-95, the applicant indicates that the tacky nature of the inner surface of the cavity is a result of the triacetin plasticizer "or other components of the filter" (paragraph 0059). Because it is well known to make filters out of cellulose acetate plasticized using triacetin as discussed in the rejection of claim 62 above, it would have been obvious that such a typical filter material would have had an inherently tacky inner surface and hold a capsule in a fixed position either through adhesion or through frictional confinement (i.e. the capsule of Dorsey cannot move as it is wedged against other surfaces).

16. Regarding 91, the cellulose acetate disclosed by Berger is capable of adsorbing liquids.

17. Claims 65, 76, 77, 82, 88, 89, and 92-95 are rejected under 35 U.S.C. 103(a) as being unpatentable over Berger (US 4,046,063), Homburger (US 3,297,038), and Dorsey (US 5,549,124) as applied in the rejection above, in further view of Irby Jr. et al. (US 3,390,686). Berger, Homburger, and Dorsey do not teach the use of flavorings or breath fresheners (which the examiner interprets as the same). However, it is known in the art to use flavorings in capsules. For instance, Irby Jr. et al. disclose a similar cigarette filter structure with an outer filter material, an inner filter material (figure 2; col. 4, 1-17), a cavity within the inner material that contains a generally spherical capsule composed of gelatin that contains a diluting agent (water) and flavoring, metal salts, activated charcoal (for altering smoke composition), and/or medicines (col. 3, 18-61). Irby Jr. et al. also teach that cellulose acetate tow, or other filter materials used, can be treated with a stiffening material (col. 3, 11-17) and that the filter should be resilient and

return substantially to its tubular shape (col. 1, 49-55). It would have been obvious to one of ordinary skill in the art at the time of invention to use the compounds disclosed in the capsule, or the capsule of Irby Jr. et al., in the cavity of Berger. Doing so would have allowed for the delivery of flavorings, medicines (breath fresheners) or other compounds to the cigarette user as disclosed by Irby Jr. et al.

18. Regarding claims 77, 89, and 92-95, although the use of triacetin as a plasticizer in cellulose acetate filters, and thereby, would obviously adhere capsules, is discussed in the rejection of claims 77, 89, and 92-95 above, Irby et al. expressly teaches the use of adhesives such as starches to adhere (i.e. to make sticky) the capsules to the filter material (col. 4, 1-20). It would have been obvious to one of ordinary skill in the art at the time of invention to use adhesives to make the area between the cavity and the capsule sticky (i.e. make the cavity sticky).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MICHAEL J. FELTON whose telephone number is (571)272-4805. The examiner can normally be reached on Monday to Friday, 7:30 AM to 4:30 PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Phillip C. Tucker can be reached on 571-272-1095. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/M. J. F./
Examiner, Art Unit 1791

/Philip C Tucker/
Supervisory Patent Examiner, Art Unit 1791